

IN THE CLAIMS:

1. (Currently Amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material, which comprises ~~copper~~ or a first copper alloy having at least an unmelted phase, and ~~aluminum~~ or a first aluminum ~~ally~~ alloy having at least a melted phase, formed by flame-spraying an aluminum-alloy powder and a copper alloy powder, wherein said first copper alloy comprises 40% by weight or less of Pb, and said first aluminum comprises from 10 to 60% by weight of Si.

2. (Currently amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 1, wherein said first copper alloy comprises a second copper alloy, which is formed by incorporating ~~said aluminum~~ or a component of the first aluminum alloy into the first copper alloy, by flame-spraying.

3. (Currently amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 2, wherein said first aluminum alloy comprises a second aluminum alloy, which is formed by incorporating ~~said copper~~ or a component of the first copper alloy into the first aluminum alloy, by flame-spraying.

4. (Currently amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claims 2 or 3, characterized in that the main structure consists of the unmelted phase of the ~~copper~~ or the first copper alloy and the melted phase of aluminum or the second aluminum alloy.

5. (Currently amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 4, wherein said flame-sprayed layer surface comprises at least either of the melted phase of ~~copper~~ or the first copper alloy and the melted phase of the first aluminum alloy.

6. (Canceled).

7. (Canceled).

8. (Currently amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim ~~[[7]]~~ 1, characterized in that said first copper alloy contains from 0.5 to 50% by weight of one or more selected from the group consisting of 30% by weight or less of Sn, 0.5% by weight or less of P, 15% by weight or less of Al, 10% by weight or less of Ag, 5% by weight or less of Mn, 5% by weight or less of Cr, 20% by weight or less of Ni, and 30% by weight or less of Zn.

9. (Currently amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim [[7]] 1, characterized in that said first aluminum alloy further comprises 30% by weight or less of Sn.

10. (Currently amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim [[7]] 1, characterized in that said first aluminum alloy further comprises at least one element of the group consisting of 7.0% by weight or less of Cu, 5.0% by weight or less of Mg, 1.5% by weight or less of Mn, 1.5% by weight or less of Fe, 8% by weight or less of Cr, and 8.0% by weight or less of Ni.

11. (Currently Amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 10, characterized in that said first aluminum alloy further comprises 30% by weight or less of Sn.

12. (Currently Amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 8, characterized in that said first aluminum alloy further comprises 30% by weight or less of Sn.

13. (Currently Amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 8, characterized in that

said first aluminum alloy further comprises at least one element of the group consisting of 7.0% by weight or less of Cu, 5.0% by weight or less of Mg, 1.5% by weight or less of Mn, 1.5% by weight or less of Fe, 8% by weight or less of Cr, and 8.0% by weight or less of Ni.

14. (Currently Amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 13, characterized in that said first aluminum alloy further comprises 30% by weight or less of Sn.

15. (Currently amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim [[7]] 1, characterized in that the entire composition is Cu: 8-82% by weight, Al: 5-50% by weight, Pb: 32% by weight or less, and Si: 5-50% by weight.

16. (Currently Amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 8, characterized in that the entire composition is Cu: 8-82% by weight, Al: 5-50% by weight, Pb: 32% by weight or less, Si: 5-50% by weight, Sn: 24% by weight or less, P: 0.4% by weight or less, Ag: 8% by weight or less; Mn: 4% by weight or less, Cr: 4% by weight or less, Ni: 16% by weight or less, and Zn: 24% by weight or less.

17. (Currently Amended): A sliding layer of a sliding member, consisting of flame-

sprayed copper-aluminum composite material according to claim 9, characterized in that the entire composition is Cu: 8-82% by weight, Al: 5-50% by weight, Pb: 32% by weight or less, Si: 5-50% by weight, and Sn: 21% by weight or less.

18. (Currently Amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 10, characterized in that the entire composition is Al: 15-50% by weight, Cu: 8-50% by weight, Pb: 32% by weight or less, Si: 5-50% by weight, Mn: 1.2% by weight or less, Cr: 5% by weight or less, Ni: 4% by weight or less, Mg: 4.0% by weight or less, and Fe: 1.2% by weight or less.

19: (Currently Amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 11, characterized in that the entire composition is Al: 15-50% by weight, Cu: 8-50% by weight, Pb: 32% by weight or less, Si: 5-50% by weight, Sn: 24% by weight or less, Mn: 1.2% by weight or less, Cr: 5% by weight or less, Ni: 4% by weight or less, Mg: 4.0% by weight or less, and Fe: 1.2% by weight or less.

20. (Currently Amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 12, characterized in that the entire composition is Al: 15-50% by weight, Cu: 8-50% by weight or less, Pb: 32% by weight or less, Si: 5-50% by weight, Sn: 30% by weight or less, Mn: 4% by weight or less,

Cr: 4% by weight or less, Ni: 16% by weight or less, and Zn: 24% by weight or less.

21. (Currently Amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 13, characterized in that the entire composition is Al: 15-50% by weight, Cu: 8-50% by weight, Pb: 32% by weight or less, Si: 5-50% by weight, Sn: 24% by weight or less, P: 0.4% by weight or less, Ag: 8% by weight or less, Mn: 5% by weight or less, Cr: 8% by weight or less, Ni: 20% by weight or less, Zn: 24% by weight or less, Mg: 4.0% by weight or less, and Fe: 1% by weight or less.

22. (Currently Amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 14, characterized in that the entire composition is Al: 15-50% by weight, Cu: 8-50% by weight, Pb: 32% by weight or less, Si: 5-50% by weight, Sn: 30% by weight or less, P: 0.4% by weight or less, Ag: 8% by weight or less, Mn: 5% by weight or less, Cr: 8% by weight or less, Ni: 20% by weight or less, Zn: 24% by weight or less, Mg: 4.0% by weight or less, and Fe: 1% by weight or less.

23. (Currently Amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 3, wherein at least a portion of said first copper alloy, consists of Cu crystals, and at least a portion of said first

aluminum alloy, consists of Al crystals.

24. (Currently amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim [[6]] 1, characterized by further containing 30% by weight or less of graphite particles.

25. (Currently Amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 1, characterized by further containing 30% by weight or less of one or more selected from the group consisting of Al_2O_3 , SiO_2 , SiC , ZrO_2 , Si_3N_4 , BN , AlN , TiN , TiC , B_4C , iron-phosphorus compounds, iron-boron compounds, and iron-nitrogen compounds.

26. (Currently Amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 1, wherein it is laminated on a substrate and is coated with a metal layer which is softer than the substrate.

27. (Currently Amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum material according to claim 26, wherein said soft metal layer is a plating layer of Pb, Pb alloy, Sn or Sn alloy.

28. (Currently Amended): A sliding layer of a sliding member, consisting of flame-

sprayed copper-aluminum material according to claim 26, wherein said soft metal layer is a plating layer mainly consisting of Pb and Sn.

29. (Currently Amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum material according to claim 2 or 3, characterized in that said flame-sprayed surface layer is coated with a film, which comprises MoS₂ or graphite or a mixture of MoS₂ and graphite.

30. (Currently Amended): A method for producing a sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material, comprising flame-spraying material containing powder of copper or copper alloy and powder of aluminum or aluminum alloy such that a portion of these powders is melted and a portion is not melted.

31. (Canceled).

32. (Currently amended): A method of producing a sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 30 ~~or 31~~, wherein said copper alloy is Cu-Pb based alloy, and said aluminum alloy is Al-Si based alloy.

33. (Currently amended): A method for producing a sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 30 ~~or 31~~, wherein 30% by weight or less of graphite powder is mixed with the material prior to flame-spraying.

34. (Currently amended): A method for producing a sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 30 ~~or 31~~, wherein 30% by weight or less of one or more selected from the group consisting of Al_2O_3 , SiO_2 , SiC , ZrO_2 , Si_3N_4 , BN , AlN , TiN , TiC , B_4C , iron-phosphorus compounds, iron-boron compounds, and iron-nitrogen compounds is mixed with the material prior to flame-spraying.

35. (Currently amended): A method for producing a sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 30 ~~or 31~~, wherein the flame spraying is carried out on a surface of a metallic substrate, the surface of the metallic substrate having been roughened to RZ 10-60 μm or more prior to flame spraying.

36. (Currently amended): A method for producing a sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material according to claim 30 ~~or 31~~, wherein heat treatment of the flame-sprayed layer is carried out subsequent

to the flame spraying.

37. (Currently amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material, which consists of copper or a first copper alloy having at least an unmelted phase, and aluminum or a first aluminum alloy having at least a melted phase.

38. (Currently amended): A sliding layer of a sliding member, consisting of flame-sprayed copper-aluminum composite material, which consists of copper or a first copper alloy having at least an unmelted phase, and aluminum or a first aluminum alloy having at least a melted phase, formed by flame-spraying an aluminum-alloy powder and a copper alloy powder.